

Universal Consciousness: *Actuality or A Fragment of Imagination?*

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The Experiments: *Power of Mind over Matter*

- Several [experimental research work](#) on the extended capabilities of human consciousness have been conducted for more than five decades.
- While a statistically significant correlation was noticed in these experiments, demonstrating the power of mind over matter, they failed to generate enough excitement.



What Could be the Plausible Explanation for the Power of Mind?

- How did the information, that the mind is attempting a conscious intent, travel to the object being influenced? *Seems there is some field of influence at work.*
- Are we really surrounded by a field that can communicate with both our mind and the object? *Quite likely!*
- Is there some relationship between us and this universal field? *Lets find out....*



A Brief Introduction: *Universal Consciousness*

- In all likelihood, this field which is communicating, is the universal field of Consciousness - Brahman (ब्रह्म)
 - It is the all-pervading underlying layer of reality, a form of energy, which itself does not undergo any change and from which everything in this universe manifests
 - It is the omnipresent field which is apart from the mind-body system but it pervades and illumines the mind-body system and is known in its functioning
- An in-depth account of [Universal Consciousness](#) exists in the Ancient Indian Texts –Vedanta



How Do I Rationalize This?

- The thoughts expressed in these ancient texts is knowledge revealed during transcendental experience which is bordered on mystical ideas. Don't they lack scientific objectivity? *Many believe that contemporary evidence based knowledge system and transcendental knowledge system would describe two different realities, but that's not necessarily true.*
- A reliable example can be found in a [paper published in 1995](#) which documents the case in which ostensible paranormal descriptions of subatomic particles published nearly 100 years ago have been confirmed by nuclear physics and particle physics and were also found to be consistent with the basic ideas of superstring theory.

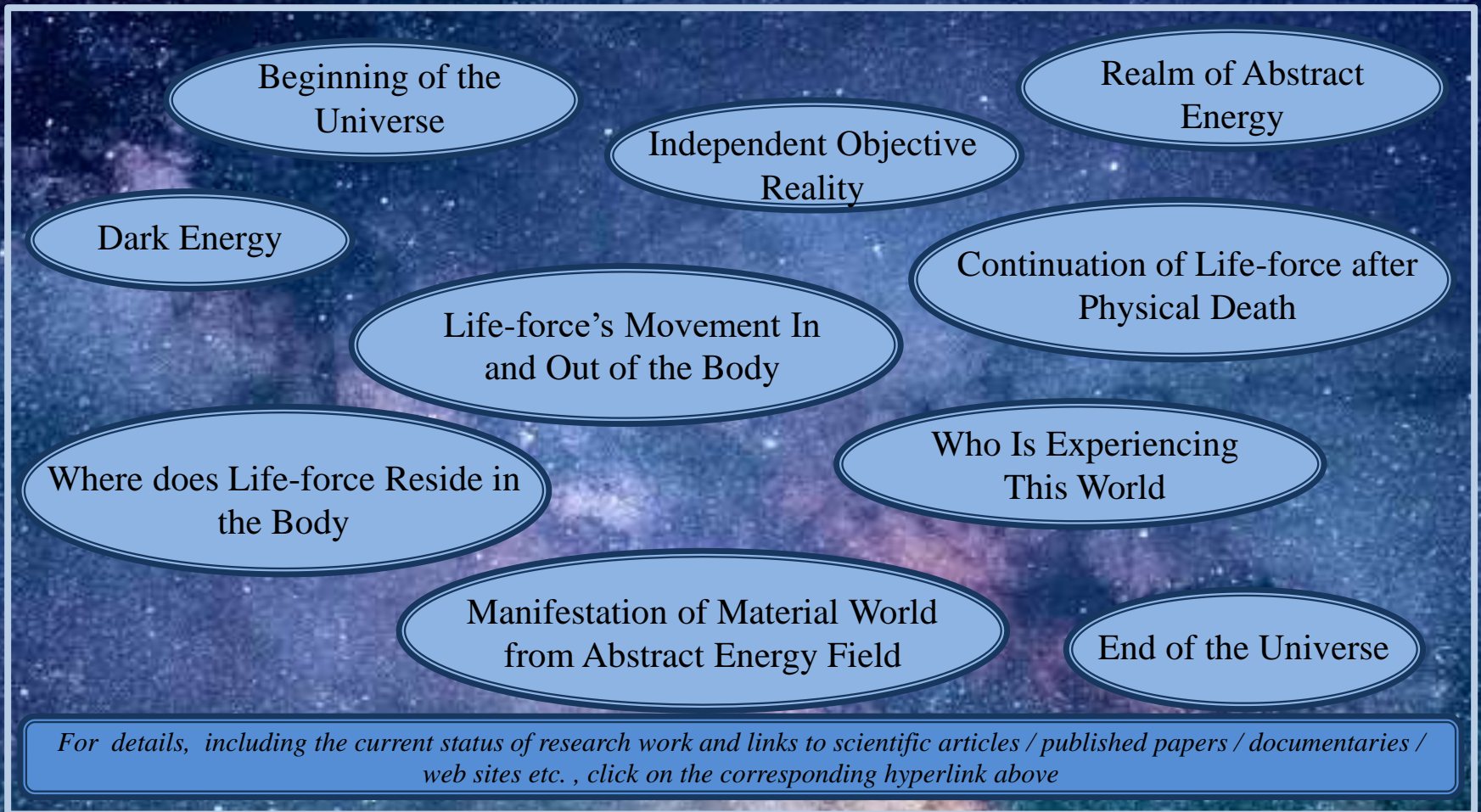


Contemporary Knowledge System: What Does It Reveal?

- Most of the researchers involved in the present-time studies do not believe in the paradigm that Universal Consciousness is the underlying layer of reality.
- In fact, many conceptualize it to be an emergent phenomenon of the brain.
- Yet, the irrefutable mathematical formulations or evidence based discoveries, uncovered after years and sometimes decades of study, independently reveal the same facts as mentioned in the Vedanta.



Point by Point Comparison



Click on the corresponding oval or scroll down for details



Do These Patterns Really Exist Or We Just Want Them To Exist?

- Most of these ideas operate on a scale that the current experiments are not able to easily access. Hence it will take time before everything can be explained in terms that are acceptable to the modern scientific world view.
- But we should also note that none of the attributes of Universal Consciousness have been categorically ruled out by the contemporary researchers and the jury is still out.



Compelling Consistency

- Considerable commonalities have been noticed between these two seemingly disparate knowledge systems (*contemporary evidence based knowledge system and transcendental knowledge system*). But separatism (*a school of thought which does not believe in the underlying unity of all things*) has been so deeply ingrained in most of us that we find it difficult to recognise these consistencies.
- However, with each new research or experiment, we are inching towards the realisation that Universal Consciousness is more deeply connected to the fabric of reality than previously thought.



What Did The Experiments Unveil?

- There is a significant correlation between the conscious intent of the mind and the manifestation of desired outcome of the event being influenced (generally, an inanimate object - matter)
- How this influence works is still a mystery, but if we believe the vedantic philosophies, then this field of influence is Universal Consciousness.
- You may dismiss this conclusion as highly speculative but there is a clear indication that mind, matter and this field of influence either '*speak the same language*' or '*Are all reflections of the ONE whole*'



Why Acknowledge Without Conclusive Proof ?

- Appreciation and acceptance of primacy of Universal Consciousness will help acquire a new perspective of life which will, in turn, benefit us in a lot of ways
 - Eases the grip of negativity when we are grappling with our day-to-day challenges
 - Provides much needed order in chaotic society
 - Clarifies the mysteries of alternate forms of healing and other branches of knowledge which many have dismissed as pseudoscience
 - Demystifies a lot of unexplained phenomena which are despised as paranormal / psychic or set aside as miracles



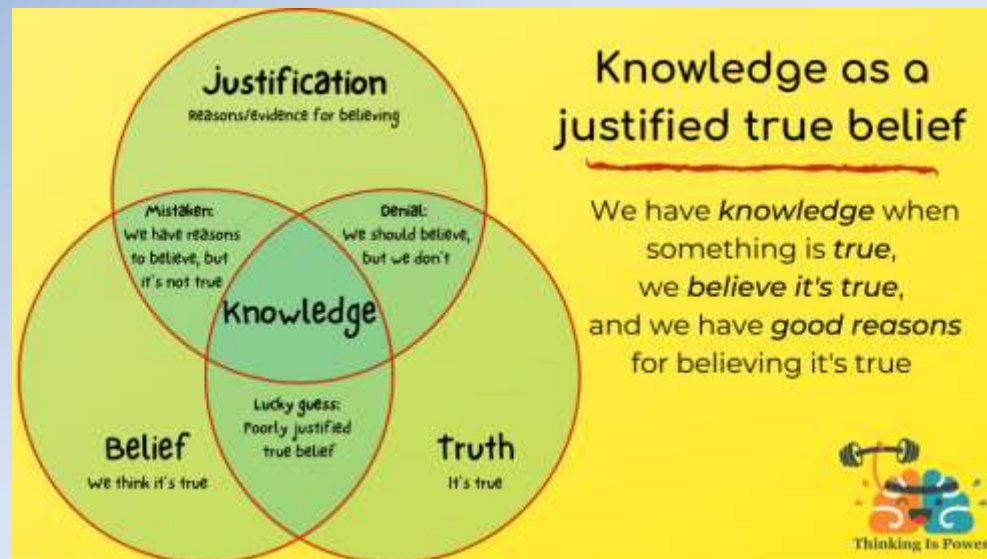
Who Else Believes in This Big Picture?

- While the existence of statistically significant correlation indicates some kind of a relationship but it does not necessarily imply causality.
- There are [some research groups](#) which are trying to unite all available information in a comprehensive theory that is based on the primacy of Universal Consciousness and thereby attempting to uncover this obscure causality.
- Choice is ours, whether we want to start believing the available clues and [reap the benefits](#) or wait till the big picture reveals itself in the coming years or decades or centuries....



So What Is It - Imagination or Actuality?

The clues / conjectures / plausible theories are listed on [‘Point by Point Comparison’](#) for you to draw your own conclusion.



Click on the underlined text or scroll down
for details



This is a humble effort to share with you some pieces of information uncovered by decades of multiple independent research work by people across the globe that, we believe, could lead to re-establishing the conviction in the concept of Universal Consciousness. Do share with us any information you have regarding similar work being carried out elsewhere and help us upgrade this compilation.

The information presented here was compiled in Jun 2022 by Switi Gupta and Manish Pajan.

For latest updates or any other feedback you can contact us at imaginationoractuality@gmail.com or by clicking on the mail icon below.



The Experiments - Extended Capabilities of Human Consciousness

There are times when experiments uncover something totally unexpected which, in turn, leads to creation of new branches of science and technology. Sharing a little story of how the first waves in the invisible region of the spectrum of light were discovered.

In 1666, Isaac Newton showed that white light was made of seven colours by passing it through a prism. Then in 1800, with the advent of sufficiently sensitive and accurate mercury thermometers, William Herschel placed one such thermometer in front of a spectrum of light and found that as he moved it across the bands of different colours from violet to red, the temperature rose. To his surprise it continued to rise when he accidentally left the thermometer up to an inch past the region of red light.

Herschel had detected what was later named infrared radiation. Radiation, that was invisible to human eyes, was detected from the heat that it generated. In 1801, using the fact that silver nitrate darkens when exposed to light, Johann Ritter discovered invisible light at the other end of the spectrum beyond the violet: ultraviolet radiation.

This is how the scientific community realised that red and violet represented the limits of the human eye and not the limits of the light spectrum. No one had even envisaged their existence before this 'accidental experiment' and today, technology is utilizing these invisible radiations in a number of applications like medical diagnosis and treatment, communication, forensic investigations, etc.

Similarly, a few decades ago, some experiments demonstrated what appeared to be the anomalous effects of human intention on physical systems - the power of mind over matter. This inspired Robert G Jahn, then Dean of the School of Engineering and Applied Sciences, to create a dedicated laboratory, in 1979, at Princeton University called the PEAR Lab. Most of their experiments addressed mind-machine interaction with a focus on the broad range of potential modulators of anomalous effects. The goal was to first establish that an anomalous effect of human intention could be demonstrated, and then to study what factors facilitated or hindered such effects. For details of various research and experiments conducted by them in the 27 years of their operation, see - <https://psi-encyclopedia.spr.ac.uk/articles/princeton-engineering-anomalies-research-pear>

While a number of similar research experimental work is being conducted across the globe, another interesting project going on since 1998 is the Global Consciousness Project (GCP). It is an attempt to detect possible interactions of "global consciousness" with physical systems. The project monitors a geographically distributed network of hardware random number generators in a bid to identify anomalous outputs that correlate with periods of focused attention by large numbers of people like widespread emotional responses to world events. The GCP is privately funded through the Institute of Noetic Sciences and describes itself as an international collaboration of about 100 research scientists and engineers. For a brief overview, see the video - <https://youtu.be/cnvJfkI5NVc>.

The Experiments

Universal Consciousness - A Brief Introduction

The knowledge existing in the Vedanta corresponds to the eternal principles of the universe as revealed to the first known set of spiritual scientists/seekers. Far from being supernatural, this knowledge came from rigorous extrapolation of the rational generalisation based on patterns in the visible world to universal features of the cosmos. These texts contain the universal truth that anyone from any culture can relate to - the truth about the all-pervading, omnipresent abstract energy field called Universal Consciousness (Brahman) and our relationship with it.

Originally there was nothing except a realm of all-pervading abstract energy field in a latent state wherein everything was present but in an undifferentiated state. The condition that prevailed was of darkness wrapped in darkness. There was neither any movement nor any change nor time nor any space. There was neither existence nor non-existence. There was life in it, but without any sign of life.

From this unmanifested energy, in which everything was still and enclosed in nothingness, were produced, from the power of heat, the primal energy and matter. This energy and matter continued to multiply and divide and, then, they together created everything in the universe, the diversified finite world that we know today, which is characterized by movement and change.

Despite the phenomenal manifestation of the entire material world, this realm of abstract energy did not diminish at bit and remained absolute and unchanged. This powerful force, shaping the evolution and fate of the entire cosmos, is so vast that it outweighs everything else that we see or know. It is infinite, indestructible, eternal and independent of anything that resides within it and the manifested material world is transient or temporary in nature and depends on this omnipresent energy field for its existence.

This all-pervading underlying layer of reality is not just responsible for the creation of this universe, but is also associated with its end. It causes the annihilation of the universe at regular intervals, each interval being about 311 trillion years long. Once the annihilation has occurred, creation begins all over again. It is a cyclic process - an infinite loop from nothingness back to nothingness.

Apart from the insentient material world, this energy field also set forth a world of living realities out of itself. In fact, it resides as the life-force within each and every entity and witnesses this manifested world and the entire range of emotions through that entity. In this journey, it takes the shaping appearance of matter and develops and works as per the laws of nature, so much so that it even forgets its real identity.

It mis-identifies itself with the mind-body system and believes that the qualities and character of the body and mind defines who it is. Therefore, it is gripped by a false sense of limitation and gets entrapped in the sufferings of the body and mind. This painful feeling that it is just a limited material mind-body system continues over lifetimes until it realizes that instead of being the flawed, mortal, ever-changing and limited mind-body, it is the immortal, changeless, limitless *Brahman*, the very essence of the entire universe, that is always perfect just as it is.

And when we recognize this truth and feel it, deeply, wholly, in every cell of our being, we have reached our destination in the ultimate quest for everlasting contentment and peace.

Vedantic Philosophies

A Brief Introduction

Contemporary Evidence-based Knowledge System (Science) and Transcendental Knowledge System

Stillness and inner absorption, when performed with determined focus and intention, inevitably results in personal transcendental experience and facilitates in finding the answer to 'what is nature'. It helps in development of some kind of direct acquaintance and experience of the world in a form where our relationship with it is not being mediated and modified by our senses.

Science, on the other hand, helps answer the question - 'how nature behaves'. It is the study of and knowledge about the physical world and natural laws. These laws are nothing but predictive models of how nature works which, in turn, aids in the development of technologies for the mankind. Science identified these laws of nature so well that over the centuries it polarised the perspective of humanity and gave rise to the belief that science is the most fundamental concept of this world and can explain anything and everything.

As a result, contemporary evidence-based knowledge system was considered a more authentic methodology for understanding nature. Information acquired about the world using transcendental knowledge system was thought to describe a different reality.

However, there are many instances wherein the information acquired during meditation was confirmed by advances in science many years later. Here is an abstract of the article by Stephen M. Phillips published in the Journal of Scientific Exploration, Vol. 9, No. 4, pp. 489-525, 1995 wherein he documents in details one such revelation which is, arguably, the most convincing type of ESP (extra sensory perception). This example permits the sceptics no room for doubt since the correlations between scientific facts and psychic observations are so numerous as to make lucky guessing extremely implausible. This paper examines the rare case in which descriptions of subatomic particles revealed during transcendental experience and published nearly 100 years ago have turned out to be both confirmed by facts of nuclear physics and particle physics and consistent with some as yet untested scientific ideas or theories of superstrings.

Abstract : A century-old claim by two early leaders of the Theosophical Society to have used a form of ESP to observe subatomic particles is evaluated. Their observations are found to be consistent with facts of nuclear physics and with the quark model of particle physics provided that their assumption that they saw atoms is rejected. Their account of the force binding together the fundamental constituents of matter is shown to agree with the string model. Their description of these basic particles bears striking similarity to basic ideas of superstring theory. The implication of this remarkable correlation between ostensible paranormal observations of subatomic particles and facts of nuclear and particle physics is that quarks are neither fundamental nor hadronic states of superstrings, as many physicists currently assume, but, instead, are composed of three subquark states of a superstring.

(https://www.google.com/url?sa=t&source=web&rct=j&url=https://citeseerx.ist.psu.edu/viewdoc/download%3Fdoi%3D10.1.1.685.8402%26rep%3Drep1%26type%3Dpdf&ved=2ahUKEwjI9oOH4P71AhVpS2wGHXleD6EQFnoECDQQAQ&usg=AOvVaw3KjU_0hSdGjWJJ55Yds65d): Link of the Article

How Do I Rationalize This?

Beginning of the Universe

It was widely believed, until about a century ago, that the universe was created at some point of time in the distant past and it has remained essentially unchanged thereafter. But this 'Eternal Universe' theory suffered a setback when it was found that our universe is expanding. Then came the suggestion of a steady state universe – a universe which is expanding, but new matter appears in the voids generated by the expansion, implying that the early universe still looked more or less similar to the current one. This universe, however, would be expected to have different properties in different regions as each region is causally disconnected from others.

Soon the steady state universe idea was shattered by the discovery of the cosmic microwave background - an envelope of radiation that surrounds the universe. Cosmic microwave background is essentially very smooth, indicating that all regions of the universe, however close or far apart they may be from each other, have roughly the same temperature. The only logical explanation for this was a common point of origin for the entire universe. Thus, came the idea of the Big Bang Theory which states that the universe began from an extremely hot, very dense and very uniform state that inflated over roughly 13.8 billion years ago, creating light radiation and matter as it became bigger and colder.

While there were a few more theories that were proposed like Plasma Cosmology, Mixmatch Cosmology etc. but their math never really explained all the features of the universe. Only the Big Bang theory explained all the observations: the expansion of the universe, the formation of the light elements, the existence of the cosmic microwave background, the evolution of the cosmic web and more. But the non-uniform distribution of matter across space indicates that there was not enough time in the early universe for all the fluctuations to even out. This gave rise to the idea of cosmic inflation that preceded the Big Bang (cosmic inflation is a theory of exponential expansion of space in the early universe).

Both experimentally and observationally, however, there is no information accessible to us, in our visible Universe, that would allow us to determine how inflation arose. Cosmologists offer tantalizing possibilities. Maybe our universe was begotten from a previous existence, part of an endless cycle, or formed in the violent collision between two other universes. Or perhaps, the most unsettling answer of all is, that our universe was born from nothing.

And if that is the case, how does one get something from nothing? Before we go into the details of that, let's see what the Ancient Indian Texts said about the beginning of the universe....

Originally, there was nothing. There was neither existence nor non-existence. Before the evolution and diversification of the finite world from the infinite, the condition that prevailed was of darkness wrapped in darkness. All this was only unilluminated cosmic water. There was neither any movement nor any change nor time nor any space. From this infinite, in which everything was still and enclosed in nothingness, was born from the power of heat the diversified world which is finite and is characterized by movement and change. The infinite from which the finite and knowable world arose is neither a being nor a non-being. There is life in it, but without any sign of life. This infinite has no knower, because it is unknowable.

Now, back to the question - how does one get something from nothing? It sounds so counterintuitive. Here is a documentary which throws light on the various discoveries and developments in quantum mechanics over the last century that resulted in a change in the understanding of reality and acceptance of the fact that these seemingly bizarre claims are not so far-fetched as they sound. (<https://youtu.be/MOltjGpiAfo>: Was the Universe Born from Nothing?)



Independent Objective Reality

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One of the first experiments that brought to light the central mystery of the quantum world was the double slit experiment which showed that matter and energy can behave both as waves and as particles (wave-particle duality). (<https://www.youtube.com/watch?v=A9tKncAdIHQ>: Double slit experiment). The unexplained aspect of this experiment is that the behaviour displayed by matter or energy changes with the observation process. Physicists realized that while the world may be predictable to a large extent at the macrolevel but when they try to understand its building blocks, everything becomes fuzzy. Reality at quantum level is governed by probabilities and uncertainties and no one understands why a particular outcome is favoured and why one of the remaining was not selected.

Even the most imaginative and intellectually adept physicists could not fully fathom how nature was operating. And thus, almost a 100 years ago, began the famous debate between Niels Bohr and Einstein.

Bohr rejected the existence of an objective reality as he tried to understand what quantum mechanics was telling him about the quantum world. He believed that quantum particle did not possess pre-existing properties and the act of observation / measurement somehow influenced its properties. He found it appalling that people like Einstein did not want to accept these facts which were supported by experiments; it is as if we are trying to force nature to accept our preconceived notion of 'reality'.

Einstein was at unease with the role of probability and chance in quantum mechanics and believed in a reality that exists 'out there' independently of whether it is observed or not. He was uncomfortable with the rejection of the concept of causality or determinism and was convinced that quantum mechanics is incomplete, only a part of the whole truth, and there must be a complete theory waiting to be discovered.

The scientific community is still grappling with this question. Based on the ideas published in the 1935 Einstein – Podolsky – Rosen paper, John Bell devised an inequality in 1964 to experimentally explore this concept. The experiments, however, demonstrated that the inequality was violated indicating that Bohr's view was correct. The experimental setup was questioned and some loopholes were identified. After multiple such rounds, it was finally in 2015 that the first loophole-free experiment which violated Bell's inequality was successfully conducted, proving that no independent reality exists. (see the 2019 Documentary 'Quantum Riddle' <https://youtu.be/8LEUFNuyoNY> for details)

Another way of testing realism is provided by the Leggett Garg inequality (devised in 1985 by Anthony Leggett and Anupam Garg). Experimental falsification of this inequality would not only falsify realism but would also confirm that quantum mechanics is not limited to micro-world but can also be applied to bigger objects. In Jan 2022, a team of scientists from Raman Research Institute, published their findings after successfully conducting the first loophole-free experiment that showed a significant amount of violation of Leggett Garg inequality and, thus, is the most decisive refutation of the notion of realism to date. (<https://dst.gov.in/einsteins-idea-reality-experimentally-proven-decisively-wrong-indian-scientists-paving-way-more>)

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Independent Objective Reality

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These developments force physicists to conclude that our deterministic experience of the universe is an illusion. Instead, the foundation of reality is fundamentally and weirdly probabilistic and linked to the observation process.

However, there are some physicists who still believe that the probabilistic properties of quantum mechanics can all be explained by a set of hidden laws that sit beneath the surface of quantum mechanics. This includes a small group of theoretical physicists led by the Nobel Prize winner, Gerard 't Hooft. For them, the concept of determinism – that one thing leads to another – is sacrosanct. According to their thinking, superdeterminism is so fundamental that it influences not just the particles that are being measured but the entire experimental set up, including the observers themselves because all the particles and forces involved share the same history of the universe. This shared history essentially forces these experiments to appear paradoxical, as if there was spooky action at a distance, when they are actually deterministic. In other words, there is a loophole in Bell's tests that allows the universe to trick us into thinking that quantum mechanics is probabilistic. (see <https://arxiv.org/search/hep-th?searchtype=author&query=Hooft%2C+G+t> for some of the latest papers published by him on his ideas related to superdeterminism)

Even the sages of yesteryears hold varying views on the nature of *Jagat* (the insentient material world) and it is essentially these differences of interpretation of the inter-relation of *Brahman* (Universal Consciousness) with *Jagat* that gave rise to different schools of Vedanta (for details see [Vedantic Philosophies](#)). As per the age-old wisdom *Jagat* is *mithya*. But, what is *mithya*? *Mithya* means something that cannot exist on its own, it depends on something else and is constantly changing. Some interpret it as an illusion while others say that *mithya* only means transient or temporary implying that there is no unreal because everything in this universe is a projection or manifestation of the and from the 'real' *Brahman*.

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Realm of Abstract Energy

According to Vedanta everything in our universe has manifested from the all-pervading, omnipresent energy called *Brahman*. There is no place where this energy is not present and the whole material universe is created by it and from it; yet *Brahman* remains the same complete whole, as before, without any change or loss.

However, the mainstream scientific paradigm, with its roots in materialism, found this infeasible. It was not ready to accept the existence of some abstract energy that is latent and unknowable, something that is so vast that it outweighs everything else that we see or know in this universe. But over the last few decades, quantum physics and cosmology unearthed three abstract concepts - vacuum energy, dark matter and dark energy – which introduced an entirely new perspective of the universe.

When physicists explored deeper into the laws of quantum physics and relativity theory, they realised that for maintaining the self-consistency and balance in the mathematical equations describing the universe, there should exist terms corresponding to more mass and energy than was known. As per their estimates, the ordinary matter that this universe has (which makes up all the stars, planets, galaxies and everything that we know) is less than 5 percent of the mass/energy that the universe should have. The rest of the universe appears to be made of some mysterious, invisible substance/force that they called dark matter/energy.

Originally known as the ‘missing mass’, dark matter’s existence was first inferred by Swiss American astronomer Fritz Zwicky, who in 1933 discovered that the mass of all the stars in the Coma cluster of galaxies provided a very small percent of the mass needed to keep the galaxies from escaping the cluster’s gravitational pull. The reality of this missing mass remained in question for decades. In the 1970s American astronomers Vera Rubin and W. Kent Ford confirmed its existence by observing a similar phenomenon. Since no light is seen from this mass hence it was named ‘dark matter.’

In 1998, two teams independently discovered that the expansion of our universe is accelerating. This discovery completely changed our understanding of the universe. It showed that about 70% of the mass of our universe is in an unknown form which is now usually referred to as ‘Dark Energy’. Brian Schmidt, an internationally renowned researcher in cosmology and also in the physics of supernovae and gamma ray bursts, led one of these teams - the High-Z Supernova Search Team, for which he shared the 2011 Nobel Prize in Physics. He has very systematically explained the developments that led to the discovery of dark matter and dark energy in this video - The Accelerating Universe <https://youtu.be/55pcpTjd3BY>

Vacuum energy is an underlying background energy that exists in space throughout the universe. It is a special case of zero-point energy that relates to the quantum vacuum. The effects of vacuum energy can be experimentally observed in various phenomena such as spontaneous emission, the Casimir effect and the Lamb shift, and are thought to influence the behaviour of the universe on cosmological scales. But physics currently lacks a full theoretical model for understanding zero-point energy. Physicists Richard Feynman and John Wheeler calculated the zero-point radiation of the vacuum to be an order of magnitude greater than nuclear energy, with a single light bulb containing enough energy to boil all the world's oceans. This is a huge amount of latent energy. The ideas that empty space can have an intrinsic energy associated with it and that there is no such thing as a true vacuum are seemingly unintuitive, yet it is now scientifically established.

While ‘Dark energy’ is a term that encapsulates everything that is accelerating the expansion of universe, ‘vacuum energy’ is a kind of energy that permeates the whole universe. It may be a contributing factor for the dark energy, however, their inter-relationship is still not fully understood and extensive research is in progress.



Dark Energy

Astrophysicists have experimentally confirmed that the universe is expanding and that expansion is accelerating. As more and more evidence came in, a new form of energy was theorised, one that exhibits properties that no other kind of matter or radiation does – dark energy. The ‘dark’ in the name is a placeholder term that indicates that we do not know much about the true nature of this energy.

Right now, it is believed to be about 70 percent of the mass/energy of the universe, but, oddly, even as the volume of the universe grows, its energy density remains remarkably constant across the universe. It is almost as if there is something uniformly present in space whose nature is not dependent on anything that resides within space. This has prompted scientists to figure that dark energy could be a large field that permeates throughout the universe or even an inherent feature of space-time itself which doesn’t dilute but rather maintains a constant energy density as time goes on.

This description of dark energy is very similar to that of *Brahman* mentioned in Vedanta - It is the all-pervading underlying layer of reality, a form of energy, from which everything in this universe manifests; yet, *Brahman* remains the same complete whole, as before, absolute and unchanged.

Assuming dark energy is indeed a field, the quanta associated with it would be extremely light and carry very little energy. These quanta could interact with light by affecting its properties (i.e., polarization, colour, direction). However, these interactions could be subject to screening mechanisms that prevent local experiments from detecting them. In the paper published in 2021 (<https://arxiv.org/abs/2103.15834>), the researchers claim that hints of dark energy were detected at the Gran Sasso National Laboratory in Italy. The team, comprised mostly of theorists, looked at data from the XENON1T, an experiment designed to detect rare interactions between hypothetical dark matter particles and components of the noble gas xenon held in a special detector. The odds that dark energy has been detected directly are admittedly low but if it is corroborated, it would mean the first experimental verification of what is arguably the most powerful force shaping the evolution and fate of the entire cosmos. (visit <http://www.xenon1t.org/> for more details)

The Dark Energy Survey (DES) Collaboration has been scanning the skies since 2013. The new analysis, published in Jan 2022 (<https://journals.aps.org/prd/abstract/10.1103/PhysRevD.105.023520>), supports the standard cosmological model. The inferred values for cosmological parameters, such as the amplitude of matter clustering and the dark energy equation of state, agree with those predicted by the standard model of cosmology, in which dark energy is described by a cosmological constant. The uncertainty in the key parameters is less than 3%, giving very little room to alternative theories.

We may have some more leads soon. The Dark Energy Spectroscopic Instrument (DESI) is an international science collaboration managed by the Department of Energy’s Lawrence Berkeley National Laboratory (Berkeley Lab). By the end of its run in 2026, DESI is expected to have over 35 million galaxies in its catalogue. This phenomenally detailed 3D map will yield a better understanding of dark energy, and thereby give a better knowledge of the past and future of the universe.

While some scientists are trying to find evidence of dark energy in action, a few are working on brand new theories. For example, in March 2022, Enrico Barausse, astrophysicist at SISSA (Scuola Internazionale Superiore di Studi Avanzati) and principal investigator of the ERC grant GRAMS (GRavity from Astrophysical to Microscopic Scales), co-published a paper which questions whether dark energy is real or, instead, it may be interpreted as a breakdown of our understanding of gravity. "The existence of dark energy could be just an illusion," he says, "the accelerated expansion of the Universe might be caused by some yet unknown modifications of general relativity, a sort of 'dark gravity'." (<https://journals.aps.org/prl/abstract/10.1103/PhysRevLett.128.091103>)

How the story of dark energy unfolds, only time will tell...



Life-force's Movement In and Out of the Body

While it is generally accepted that we are more than just our physical body, opinion is widely divided on what is it that makes us conscious of our experiences. Most neuroscientists think that consciousness is a by-product of various neural activities in the brain, however, the spiritual leaders believe that we have a life-force which is independent of the brain activities. Many religions call it the 'soul' and believe that it continues to exist even after the body dies, but, they don't give much details of this 'soul'.

Vedanta, on the other hand, discusses this life-force in depth. The term used for this life-force is *Atman* and it emanates from the Universal Consciousness, *Brahman*, that pervades this entire universe. It says that *Atman*, just like *Brahman*, is infinite, indestructible, eternal, supreme, self-knowing and self-existing with no attributes or form or subtle body or distinguishing qualities. Vedanta further mentions the existence of '*brahmarandhra*' (*Brahman's* passage) in our body. It is the opening at the top of the skull which closes up as a baby grows. It is through the *brahmarandhra* that the life-force, or *Brahman*, enters the foetus, and it is through it again that it leaves the dying body.

From 1990 to 1995, Dr. Rick Strassman, Clinical Associate Professor of Psychiatry at the University of New Mexico School of Medicine, conducted DEA (Drug Enforcement Administration) approved clinical research. During this research he injected sixty volunteers with DMT, one of the most powerful psychedelics known. His detailed account of those sessions is an extraordinarily riveting inquiry into the nature of the human mind and the therapeutic potential of psychedelics. One of the findings of this research was that it connected DMT with the pineal gland that is considered by Hindus to be the site of the seventh Chakra and by Renè Descartes to be the seat of the soul. His book "DMT: The Spirit Molecule" makes the bold case that DMT, naturally released by the pineal gland, facilitates the soul's movement in and out of the body and is an integral part of the birth and death experiences, as well as the highest states of meditation. (for details see www.rickstrassman.com and <https://www.youtube.com/watch?v=qCVxmjuK1AI>)

A number of research projects have been undertaken thereafter. One such organization which is conducting multiple research on the role of DMT and other psychedelics is Beckley Foundation (<https://www.beckleyfoundation.org/ayahuascadmt/>). This topic was also discussed in depth in Europe's largest psychedelic science conference a few years ago where researchers grappled with the mystery of endogenous DMT among other things. (<https://www.beckleyfoundation.org/2017/07/05/do-our-brains-produce-dmt-and-if-so-why/>). Yet, even after 25 years of claims made by Dr. Strassman, the jury is still out on the role of DMT in the birth and death experiences.

Another in-depth research worth mentioning here is "Models of Consciousness to explain N,N-dimethyltryptamine and Ayahuasca Phenomenology" which was published in Feb 2022. It concludes that "...Regarding the phenomenology, the standard biological models of consciousness, which posit that conscious states emerge from or are identical with specific neural activity patterns, were found to be lacking in their explanatory power. The field of consciousness models discussed in this article provide arguably more plausible explanations for many of the core aspects of DMT and ayahuasca states and, hence, may be more convincing to those who adhere to commonly accepted evaluation criteria for theories; however, whilst conceptually intriguing and comparatively coherent, such models have not been verified in well-designed and controlled studies as neuroscientific studies have thus far only yielded superficial observations regarding receptor binding and alterations in brain function..." (<https://onlinelibrary.wiley.com/doi/full/10.1002/hup.2835>)



Continuation of Life-force after Physical Death

A distinctive feature of religions with their roots in the Vedantic philosophies, as compared to other religions who also believe in the existence of life-force or soul, is that they accept the doctrine of reincarnation or rebirth. They believe that all living things have an *atman* (life-force or the eternal-core of the living being) which goes through the cycle of *samsara* i.e. the cycle of birth, life, death and rebirth. Once the body of the living being dies, its *atman* will be reborn or reincarnated into a different body (such as a plant, animal or human) depending on its *karma* from its previous lives. *Karma*, in short, is the sum total of good and bad actions of the living being.

Samsara (संसार) is a sanskrit word that means ‘world’. It signifies the concept of rebirth to which life in the material world is bound. In simplistic terms, it means identifying with the body and mind, thinking this is who you are, and subsequently, believing that the mortality and suffering of the body and mind belongs to you. Further, you believe that the qualities and character of the body and mind define who you are. Because of this you are always trying to become something other than what you are. Perhaps you want to be happier, or taller, or desire a higher salary at work, or more respect in society. In other words, you are always feeling like you need to be something other than what you are, that you are not good enough as you are. This feeling that you are somehow lacking something is a painful thing: this is *samsara*.

This painful cycle of thinking that you are the body-mind continues over lifetimes until you realize that instead of being the flawed, mortal, ever-changing and limited body-mind, you are the immortal, changeless, limitless *Brahman*, the very essence of the entire universe, that is always perfect just as it is. And at that stage you gain enlightenment and escape the cycle of rebirth.

The most important questions in Enlightenment are Who am I? Where do I come from and where am I going? How will I live? The concept of *samsara* gives clear and precise answers to all these questions. However, this concept of *samsara* or reincarnation found no acceptance in the scientific western world view and was often ridiculed.

But over the past few decades some organisations have started exploring this area in depth. For example, the Division of Perceptual Studies (DOPS), University of Virginia, founded in 1967 by Dr. Ian Stevenson (<https://med.virginia.edu/perceptual-studies/>), is a highly productive university-based research group focused on studying phenomena related to consciousness functioning beyond the confines of the physical body, and phenomena that suggest the continuation of consciousness after physical death. DOPS researchers have objectively documented and rigorously analysed empirical data collected regarding human experiences which suggest that consciousness may persist in detectable ways beyond bodily death.

Here is a recording of a program organised by them on the occasion of completion of 50 years of pioneering research – “*Is there Life After Death?*”: <https://youtu.be/0AtTM9hgCDw>. To know more about this and related questions, you can also watch the documentary “*Can We Scientifically Measure The Soul? - Science Of The Soul*”: <https://youtu.be/S7SQoQj9868>

Where Does Life-force Reside in the Body?



Where Does Life-force Reside in the Body?

This question that has been debated for years and multiple, equally strong viewpoints exist. Most neuroscientists believe that life-force or consciousness is a by-product of the neural activities in the brain though they disagree in the details like which parts of the brain are involved in the process. Two rival theories of consciousness are right now being tested in a joint exercise. One is the Global Workspace Theory (GWT), championed by Dr. Stanislas Dehaene of the Collège de France in Paris. The other is the Integrated Information Theory (IIT), proposed by Dr. Giulio Tononi of the University of Wisconsin in Madison and backed by Christof Koch, head of Allen Institute for Brain Research in Seattle, Washington. The 'fight' hopes to put their ideas of consciousness to the test in a \$20 million project which is expected to continue till December 2022. (For details see <https://singularityhub.com/2019/10/29/the-origin-of-consciousness-in-the-brain-is-about-to-be-tested/>) Many such studies are being carried out across the globe with the most ambitious being the one in which neuroscientists are attempting to slice the human brain into thousands of thin slices and then piece the scanned images back together inside a computer, and make a 3D 'atlas' of the brain.

But if we look closely at what all these neuroscientists are attempting, we find that they plan to measure the crackling of electrical activity among neuron networks and discover which part of the brain gets activated when we have a conscious experience. It does not throw much light on what is activating these neurons; whether it is the brain circuitry or it is something which is apart from the mind-body system.

If the life-force or consciousness was just a by-product of the brain then that negates all the scientific research and evidence of reincarnation and near-death experiences (NDE). These research teams found that everyone who experienced NDE shares strikingly similar events wherein they feel that something untangled from their dying body and encountered..... Therefore, these researchers hold the opinion that life-force is an energy source that can exist on its own even without the mind-body system. (for details, see [Continuation of Life-force After Physical Death](#))

So, is our brain an organ which merely receives inputs from the consciousness? If yes, where exactly does this life-force reside and through what medium does it communicate? According to Vedanta the *Atman* (life-force) is situated within the heart and from here it spreads its influence all over the body. So, what does science say about this possibility?

While people normally associate neurons with the brain, it has now been discovered that there is a “little brain in the heart,” called the Intrinsic Cardiac Nervous System. This little nervous system in human beings is made up of about 40,000 neurons. "Many cardiologists aren't even aware there are neurons in the heart, let alone that they are critical to heart health," says James Schwaber, director of the Daniel Baugh Institute for Functional Genomics and Computational Biology at Thomas Jefferson University. He was part of a team which has, in 2020, published a paper - A Comprehensive Integrated Anatomical and Molecular Atlas of Rat Intrinsic Cardiac Nervous System. With this detailed 3D map of a rat's heart scientists can study the organization and function of the heart's neurons at an unprecedented level of details. (<https://doi.org/10.1016/j.isci.2020.101140>)

The heart-brain's neurons enable it to act independently of the head-brain. It seems that it can even learn, remember, make decisions, feel and sense. The heart-brain and head-brain are in constant communication with each other through the autonomic nervous system and it is estimated that information sent from the heart-brain to the head-brain constitutes 90% while only 10% of information travels from the head-brain to the heart-brain. Both the heart-brain and the head-brain receive and respond to information about a future event 3 to 5 seconds before the event actually happens but the heart-brain appears to receive this intuitive information approximately 1.5 seconds before the head-brain. (<https://www.oatext.com/the-heart-and-the-brain-quantic-interaction.php>). Although these claims corroborate the facts that were known to humanity centuries ago, they need to be investigated further with repeatability testing and peer reviews.



Who Is Experiencing This World?

Sir John Eccles, a famous British neurologist and Nobel laureate, declared, “I want you to know that there are no colours in the real world, there are no fragrances in the real world, that there’s no beauty and there’s no ugliness. Out there beyond the limits of our perceptual apparatus is the erratically ambiguous and ceaselessly flowing quantum soup. And we’re almost like magicians in that in the very act of perception, we take that quantum soup and we convert it into the experience of material reality in our ordinary everyday waking state of consciousness.”

Virtual Reality applications, one of the latest innovations of mankind, immerse the user in a computer-generated environment that simulates reality through the use of interactive devices, which send and receive information and are worn as goggles, headsets, gloves, or body suits. A person using virtual reality equipment is able to look around the artificial world, move around in it, and interact with virtual features or items. The main point to be appreciated here is that experience of the virtual world and reality have nothing in common. The person may be sitting in an empty room but enjoying the experience of a desert safari.

Now stretch this concept a bit. Replace the 'person' with inner-self or *Atman* and the gadgets like goggles, headsets, gloves, or body suits etc. with our senses, mind, intellect etc. And that is what Vedanta tells us about who we really are, what this world is and how we experience this world. It is *Brahman* who resides in our mind-body system as *Atman* and experiences the world. The *Brahman* is the 'supreme director' of the mind-body system and it can be appreciated by detaching it from the functions of the mind and the senses. The senses in themselves are inert and it is the faculty of the *Brahman* that gives the motive power to the mind and all the senses. It is *Brahman* who ‘hears’ the sound in ears, ‘sees’ the view in eyes, ‘beholds’ the words of speech, ‘smells’ the aroma in breath, ‘comprehends’ the meaning in thought. Our experiences are not creation of matter, instead, they are created as an appearance with the help of the senses and behind all these conscious experiences, we have the *Brahman* itself who is experiencing them.

Neurologists also believe that all our conscious experience is due to consciousness. The signals from outside world are read by the brain using the sense organs but are interpreted by consciousness. In fact, consciousness can read signals from another source too as it has tremendous ability to adjust which, in turn, allows new inputs to be interpreted by it. Our main proof of principle for this idea comes from a concept called sensory substitution, which refers to feeding sensory information through unusual sensory channels. An example is the postage stamp-sized device called the BrainPort, which works by delivering tiny electrical shocks to the tongue via a small grid that sits on the tongue. A blind subject wears sunglasses with a small camera attached. Camera pixels are converted into electrical pulses on the tongue, which feels something like the fizz of a carbonated drink. Blind people can become quite good at using the BrainPort e.g. one blind athlete, Erik Weißenmayer, uses the BrainPort to rock climb, assessing the position of crags and crevices from the patterns on his tongue. (<https://youtu.be/xNkw28fz9u0>)

Sensory substitution might sound like science fiction, but in fact it is already well established. As any neurologist will explain, seeing is nothing but electrical signals streaming into the darkness of your skull, which is interpreted by consciousness. The consciousness figures out what to do with the information it receives and how to use it to experience the world.

How exactly the brain associates the information accompanying a physical phenomenon with an experience is still a mystery. It is called the Hard Problem of Consciousness. Vedanta and contemporary scientists differ in their views on what exactly consciousness is, is it a by-product of neural activities or is it *Brahman* itself who gets associated with the mind-body at birth; yet, both schools of thought agree that it is consciousness who is the experiencer of all the experiences.



Manifestation of Material World from Abstract Energy Field

Quantum physics points out that the universe is made up of continuous fluctuating fields and all particles and forces are nothing but excitations of these quantum fields. David Tong, a professor of theoretical physics at the Cambridge University, explains in this video - https://youtu.be/zNVQfWC_evg, what we know about these fields and how they fit into our understanding of the universe. He further goes on to suggest that there seems a possibility of combining these various quantum fields into one single field, the Unified Field, from which everything else emerges - gravity, all particles, all forces, everything.

String theory, and its subsequent versions like Superstring Theory and M-Theory, is based on the fundamental concept that reality is made up of infinitesimal vibrating strings and as these strings vibrate, twist and fold, they produce effects in many tiny dimensions that we interpret as particles or forces. The Unified Field, which gives rise to these vibrating strings, is the non-material source of the material universe. It is an abstract unmanifested universal field that supports different waves of vibrations that appears as all the ingredients that we see in the universe. This Unified Field which existed long before the universe came into existence (i.e. even before the Big Bang) was contentedly sitting within itself, not dead, not lifeless but reverberating within itself.

String theory is extraordinary as it fulfils the quest to discover the unified source of the diversified universe. Although the mathematics of the theory seems perfect, there is no way to experimentally test it at the moment. But if these discoveries of science mean anything, they can only mean the existence of an intelligent consciousness which is present and working in all things.

Vedanta also shares a similar opinion and explains in depth how *Brahman* sets forth a world of living realities out of himself and how, despite the phenomenal manifestation, he continues to remain absolute and unchanged. Initially *Brahman* existed in the *avyakta* (latent) state, which was teeming with unmanifested energy, wherein everything was present but in an undifferentiated state. An oft repeated example is the seed of a tree - it has all the information of the tree that will develop from it, yet, if you open up the seed you will not find the rudiments of the tree in it. The tree is in the seed but in an undifferentiated state.

From the heat generated inside him, *Brahman* produced *Prana*, spirit - the primal energy, and *Rayi*, matter - the giver of form. We have to note here that *Rayi* does not mean only solid things which have form but includes even those which do not have forms like all our thoughts and ideas, sound waves, air, water etc. These are subtler planes of existence. The structure of even the subtlest planes of existence is matter according to the vast definition given to it in the Vedanta. But matter remains just that – matter – until it is infused with energy. These two, *Prana* and *Rayi*, together produced everything in the universe.

To explain the process of manifestation of the universe from the abstract energy field, Vedanta takes the help of a metaphor - dualism of *Purusha* (*Prana*) and *Prakriti* (*Rayi*). *Prakriti* refers to the basic cosmic material that is the root of everything, and *Purusha* to the spirit or conscious energy that governs life and reality. The image often applied to this relation is that of the man (*Purusha*) casting his seed into the woman (*Prakriti*); *Purusha's* duty is merely to originate the seed and deposit it, but it is *Prakriti's* duty to cherish the seed, develop it, bring it forth and start it on its journey of manifested life. In this journey the spirit (*Purusha*) takes the shaping appearance of matter (*Prakriti*) and develops under its laws. Actually speaking, the dualism is illusory and both are simply one thing viewed from two sides. *Purusha* is that side of *Brahman* which gives the impulse towards phenomenal existence; *Prakriti* is that side which evolves the material of phenomenal existence.



End of Universe

Vedanta associates the end of the universe with *MahaPralaya*, the Great Dissolution, which causes the annihilation of the universe at regular intervals (each interval is about 311 trillion years long). Once the Great Dissolution has occurred, creation begins all over again. It is a cyclic process - an infinite loop from nothingness back to nothingness.

Cosmologists say that the ultimate fate of the universe depends on the universe's overall shape, its density and the amount of dark energy that exists. Today, about 70% of the content of the universe is dark energy, a mysterious form of energy driving the expansion of the universe ever faster. As the universe expands, more dark energy pops into existence, which speeds up the expansion more, and that is driving the fraction of dark energy in the universe ever upwards.

Dark energy will ultimately determine the destiny of the universe.

- If it is an expansion-dominating cosmological constant, then it will eventually push away everything resulting in a state of minimum temperature and maximum entropy called the Heat Death or Big Freeze
- If it is dynamical and grows more powerful over time, then it will become stronger than gravity and cause the Big Rip wherein it will rip apart everything from stars and galaxies to atoms and subatomic particles, and even spacetime itself
- If it is dynamical and decays over time, then it would lead to a Big Crunch wherein the universe would collapse onto itself
- If it finds a way to quantum-tunnel into a lower-energy state, changing the laws of physics and destroying all the bound states (i.e., particles) of quantum fields, it would lead to The Big Slurp
- If it transitions into another form of energy, rejuvenating the Universe, creating a cyclic-like set of parameters, where we see a cyclic repetition of the Big Bang, it would result in something called conformal cyclic cosmology.

Answering these questions means learning more about how dark energy has behaved in the past. The Dark Energy Spectroscopic Instrument (DESI) is an international science collaboration managed by the Department of Energy's Lawrence Berkeley National Laboratory which will measure the effects of dark energy on the expansion of the universe and is expected to give a better knowledge of the past and future of the universe by the end of 2026. (<https://www.desi.lbl.gov/>)

Roger Penrose, a mathematical physicist, Professor of Mathematics at the University of Oxford and Nobel Laureate in physics and some of his colleagues believe in the conformal cyclic cosmology and have presented some arguments to support the idea that our universe is just one stage in a potentially infinite cycle of cosmic extinction and rebirth. They claim that they have found evidence in the form of patches within the Cosmic Microwave Background that are much hotter than the surrounding region. As per them these hot spots could be due to the (mainly electromagnetic) radiation given off during the Hawking evaporation of supermassive black holes in the previous aeon. (<https://youtu.be/ypjZF6Pdrws>: a short video in which Roger Penrose talks about Why did our Universe begin and how it will end)

While most physicists remain unconvinced, some are seriously exploring the conformal cyclic cosmology idea. A paper published in Apr 2022 presents a simple mechanism by which a dynamical form of dark energy (known as quintessence) could cause the acceleration to come to end and smoothly transition from expansion to a phase of slow contraction. As per the authors - *The conclusions are that the transition could be surprisingly soon, maybe less than 100 million years from now, and yet, for reasons described in the main text, it is not yet detectable today. The scenario is not far-fetched. In fact, it fits naturally with recent theories of cyclic cosmology and conjectures about quantum gravity* (<https://www.pnas.org/doi/10.1073/pnas.2200539119>)



Vedantic Philosophies

Vedanta is the culmination of Vedic wisdom - the world's most ancient spiritual philosophies. It is built on the foundations of the Upanishads, the Brahma Sutras, the Bhagavad Gita and the various interpretations or commentaries on the ideas contained therein. It is these different commentaries that gave rise to the different schools of Vedanta.

While all schools of Vedanta accept *Brahman* ([Universal Consciousness](#)) as the ultimate source of creation, the difference between them lies essentially in their interpretation of the inter-relation of *Brahman* with *Jiva* (the entity with a life-force) and *Jagat* (the insentient material world).

The most popular school of Vedantic thought is the *Advaita* (which means 'not two'; non-dualism) Vedanta. It is Adi Shankaracharya's commentary on the Brahma Sutras wherein he says that there is no difference between *Atman* (refers to the inner-self or the eternal-core of the personality of the *Jiva*) and *Brahman* (the constant, unchanging reality from which everything in this universe, *Jiva* as well as *Jagat*, manifested). The underlying philosophy is that, at the most fundamental level, everything is essentially the same *Brahman*, and although *Brahman* appears to undergo a transformation or a change of form, there is, in fact, no real change in the basic content *{Vivartavada}*. A very simplistic way of understanding this concept is that just as water, steam and ice are different forms of H₂O and have essentially the same chemical composition, similarly, *Jiva* and *Jagat* are nothing but different forms of *Brahman*. The relationship of *Atman* and *Brahman* has been adeptly summarised in the *mahavakya* (The Great Saying) – '*tat tvam asi*' which translates to 'thou art that' (you are divine).

Ramanujacharya's version is called *Vishishtadvaita* (qualified non-dualism) Vedanta. It is the real transformation theory (unlike *Advaita*, which is the apparent transformation theory) of *Brahman* to *Jiva* and *Jagat* *{Parinamavada}*. It states that the transformation of *Brahman* to *Jiva* or *Jagat* is a one-way process, and once completed, *Brahman* is no longer available within them; just like when milk is converted to curd, milk is no longer available nor can you convert curd back to milk again. *Atman* and *Brahman* are not the same (i.e., you are not divine), but every *Atman* can attain *Brahman* because they share the same divine essence.

Madhavacharya's radically different version is called *Dvaita* (which means 'two'; dualism) Vedanta. It is built on the premise that there is a fundamental difference between *Atman* and *Brahman* *{Tattvavada}*. These are primarily two *tattvas* or categories of reality, *svatantra tattva* (independent reality i.e. *Brahman*) and *asvatantra tattva* (dependent reality i.e. the created universe consisting of *Jiva* and *Jagat*). These are two non-identical distinct realities with *Atman* dependent on *Brahman*. There is only one *Brahman* and some *Atmans* can attain *Brahman* by choosing to do what is morally right.

Nimbarkacharya's commentary is the foundation of *Dvaita Advaita* (dualistic non-dualism) Vedanta. It believes that *Jiva* and *Jagat* are different from *Brahman* in the sense that they have attributes (*Guna*) and capacities (*Swabhaava*) which are different from those of *Brahman*. At the same time, *Jiva* and *Jagat* are not different from *Brahman* because they cannot exist independently of him. *Brahman* is independent and exists by himself.

Vallabhacharya's version is the called *Shuddha Advaita* (pure non-dualism) Vedanta. In Adi Shankaracharya's philosophy the *Jiva* and *Jagat* are *Brahman* but look different because of the ignorance (*avidyā*) and the veil of illusion (*maya*). In Vallabhacharya's philosophy the *Jiva* and *Jagat* are not illusion but real and appear distinct from *Brahman* until one is totally engrossed in the bhakti of *Krishna* (Vallabhacharya calls *Brahman* of *Upanishads* as *Krishna*) and at that time everything is realized as *Brahman*.

Independent Objective Reality

What Did The Experiments Unveil?

The first question that anyone will have is that how can we appreciate and accept something which is not known in its entirety?

And the simple answer is that there are a lot of things in this world that we know we don't know, and then there are things we don't know we don't know. "The Most Unknown" (<https://www.themostunknown.com/>) is a mind-opening documentary film which shows the journey of nine scientists — a geo-biologist, a molecular biologist, various physicists studying space and time, cognitive psychologists, and a neuroscientist — to uncover the answers to some of humanity's biggest questions. It not only touches on the basics of what the unknowns being investigated are, but also reveals the scientific mindset that motivates these scientists. The film draws out the similarities in their nature that drives each of them to explore the unknowns.

The point to be noted here is, that instead of denying the existence of these not-yet-fully-understood questions/ideas, the scientific community is acknowledging them with an open mind and is dedicating time and resources with a hope of discovering things that could directly or indirectly benefit the humanity. Unfortunately, most people choose to reject the concept of Universal Consciousness under the garb of "*how can we appreciate and accept something which is not known in its entirety*", instead of putting effort to understand it just as we are doing for so many other "most unknowns".

You might be surprised to know that while Isaac Newton came up with the gravitational theory in 1665 and we now know a lot about this force, the Standard Model in physics does not explain what gravity is, nor does Einstein's theory of relativity. Scientific community is still struggling to decipher the mechanism behind this force which all of us experience every moment of our life.

And now the next and a very pertinent question - What do we (personally and as a community) gain by acknowledging that Universal Consciousness is the underlying reality?

At an individual level and at a collective level, we are all grappling with our challenges, big and small. Somehow, we don't seem to find an answer, and this is troubling us, or at least making us uneasy. Our mind is full of questions: What is wrong with the world? How do I resolve this situation? If I can't resolve it then how do I learn to live with it? Where or who can I/we learn from? And we are told that all your answers are available with you. But to access the same you need to go within, to the place that is the seat of Universal Consciousness - the Supreme Source of Knowledge. Strange, isn't it?

As individuals, we feel that we know what consciousness is, because we experience it daily. It's that intimate sense of personal awareness we carry around with us, and the accompanying feeling of ownership and control over our thoughts, emotions and memories. We have an individual consciousness ("I am aware of X") and then we have a collective consciousness ("as a combined mass of people, we are aware of X"). However, Universal Consciousness is something different. In simple language it is the omnipresent, all pervading, all knowing realm of energy from which everything in this universe, including us, manifested. While no one denies the existence of consciousness, most people are doubtful about Universal Consciousness.

You may say that while all this sounds good, the question remains - how can we connect with this Source of Knowledge to resolve our challenges?

One of the simplest techniques is to just observe your thoughts without actively engaging with them. While you will get a feeling that most of these fleeting thoughts have originated in your mind, once in a while you will come across a thought that seems to have appeared from nowhere...that's the 'Connect'. Just like the *Eureka Moment* of Archimedes, but it need not be as dramatic! And the good part is that you don't need to go into deep meditation for establishing this connection. You can do it while engaging in any day-to-day activity (like driving, cooking, gardening, walking etc.) which you are able to do while talking to someone else; basically, activities you do using your subconscious mind. The only difference is, that instead of talking to someone, you are now observing your thoughts.

Nikola Tesla (best known for his contributions to the design of the modern alternating current electricity supply system) very nicely articulated the above when he said that *"My brain is only a receiver, in the Universe there is a core from which we obtain knowledge, strength and inspiration. I have not penetrated into the secrets of this core, but I know that it exists."*

You would now be thinking that while the above may help us at an individual level in easing the grip of negativity, but how does all this help the humanity as a whole?

To believe in something that we cannot experience directly with our senses is difficult and neither is it easy to accept at face value that Universal Consciousness is the underlying reality. But even if we start with the notion that there is some entity who is the Supreme Source of Knowledge and who reveals the secrets of the world to the chosen ones, then that is a reasonable starting point. Slowly and gradually, as we start experiencing the ‘Connect’, we start developing the trust that we, along with everything else in this Universe, are a manifestation of the and from the Universal Consciousness.

And when we realise that this universe is much more than the material things we see around us and there is a part within us that can interact with the non-material energy field surrounding us, we stop thinking of ourselves as just some physical being. And as the natural consequence, we become less attached to the material stuff, become less selfish and more compassionate. We gain a profound positivity and a comprehension of deep truths about reality and equanimity, resulting in a sense of oneness with the surrounding world and all living beings. As the number of people with this conviction and perspective of life increases, the world becomes a better place.

All this has been wonderfully explained in the documentary film by Tom Shadyac - "I Am". It emphasizes the ‘power of one’ and the interconnectedness of our world. It describes how we all are living in a participatory universe and when mass mind becomes highly focused there is something about the physical environment that is changed. (<https://www.imdb.com/title/tt1741225/>)

Are there any other benefits of realizing the primacy of Universal Consciousness?

We cannot envisage all the benefits that can accrue in the coming decades or centuries but encouraging more research and studies in this field with definitely help open new doors. For example, it may demystify many unexplained phenomena which are despised as paranormal / psychic or set aside as miracles.

The world view based on the primacy of Universal Consciousness can also provide a better understanding of the other branches of knowledge which have long been regarded as pseudoscience.

For example, Dr. Amit Goswami (a retired professor of theoretical quantum physics from the University of Oregon) believes that medicine is a timely area of application for new science within Universal Consciousness. He boldly reinterprets the leading methods of alternative medicine – homeopathy, Chinese medicine, acupuncture, Ayurveda, and conventional medicine in his book - The Quantum Doctor. He shows how these seemingly different models can be combined into a new system of integrative medicine and offers profound insights into the relationship between physics and consciousness. This approach offers physicians and patients a whole new way of applying healthcare with a greater potential for healing and could be the basis for a major paradigm shift in medicine. (https://books.google.co.in/books/about/The_Quantum_Doctor.html?id=GzS9toZSspwC&source=kp_book_description&redir_esc=y)

Some Organizations Engaged in Formulating a Framework which Includes Universal Consciousness

The success of technically sophisticated and controlled mind-over-matter experiments raised a very profound question – what is the mechanism responsible for this influence of human consciousness over the physical systems? The current scientific models, which have served well as descriptions of the classical physical world, have failed to explain how human consciousness is able to bias probabilistic systems. Hence a number of individuals and organisations are currently involved in developing and verifying (or dismissing) an explanatory framework for the basic processes by which consciousness exchanges information with its environment and interprets it. A few of them are listed below:

- Dr. John Hagelin, a quantum physicist who did his doctorate from Harvard University and is now a professor of physics at Maharishi International University, has made a bold claim that superstring theory's "unified field" is identical to "unified field of consciousness", a view that is rejected by virtually every theoretical physicist in the world. (<https://youtu.be/LPhgDfT4Zpc>)
- Quantum Gravity Research (<https://quantumgravityresearch.org>), a Los Angeles based team of scientists, is working on a unified first-principles quantum gravity unification theory called emergence theory since 2009. It weaves together quantum mechanics, general and special relativity, the standard model and other mainstream physics theories into a complete, fundamental picture of a discretized, self-actualizing universe. It views consciousness as both emergent and fundamental. In its fundamental form, consciousness exists inside every tetrahedron/pixel in the 3D quasicrystal and steers the patterns on the quasicrystalline point-space toward more and more meaning. (For an overview, in layperson terms, watch their film – What is Reality? <https://youtu.be/w0ztlIAYTEU>)
- Bernardo Kastrup, a Ph.D. in philosophy (ontology, philosophy of mind) as well as in computer engineering (reconfigurable computing, artificial intelligence), believes that the universal phenomenal consciousness is all there ultimately is, everything else in nature being reducible to patterns of excitation of this consciousness. All living organisms are dissociated alters of universal phenomenal consciousness and the inanimate world we perceive around us is the extrinsic appearance—i.e. the phenomenal image imprinted from across our dissociative boundary of universal phenomenal consciousness. (<https://youtu.be/XcMOape0PY8>)
- Institute of Noetic Sciences (IONS) (<https://noetic.org/>) was established in 1973 with the mission to reveal the interconnected nature of reality through scientific exploration and personal discovery. Their working hypothesis is that consciousness (awareness) is fundamental; it is the most basic component of reality, more basic than physical concepts like matter, energy, space, and time. They investigate this hypothesis to better understand noetic experiences, like intuitive, psychic, and mystical states with the aim to extend our capacities as humans.
- Dr. Joachim Keppler received his PhD in theoretical particle physics and quantum field theory. In 2012, he launched the research institute DIWISS (<https://www.diwiss.de/>) which concentrates on the scientific exploration of consciousness pursuing an interdisciplinary approach at the intersection of theoretical physics, neuroscience, and philosophy of mind. Currently, his research activities focus on the development of a conceptual framework for consciousness that is based on the hypothesis that phenomenal states (experiences) result from the interaction of the brain with an omnipresent field of consciousness.
- GI4QC (Global IITians for Quantum Consciousness) Forum (www.gi4qc.org) is an India based research group engaged in scientific experimentation inspired by Princeton Engineering Anomalies Research (PEAR) experiments. The group believes that the explanatory framework as to how human consciousness is able to bias probabilistic systems can be found in the Vedanta that states that everything in the universe, which includes all animate and inanimate entities and even the intergalactic vacuum, is a continuum of the all-pervading *Brahman* or Universal Consciousness and, therefore, everything is interconnected and probably capable of interacting with each other.

Who Else Believes in This Big Picture?

Thank You

